

Program to implement the test from “Pre and Post Break Inference” by Elliott and Mueller.

Files included:

Postbreaktest.m: program that undertakes the test using the four series of 71 statistics as per section 4.1 of the paper. This program should require no changes for ANY application of the test. The program returns both the test statistic and the critical value, where rejection is for values larger than the critical value. Any application will call this program after computing the relevant statistics for the particular application.

In addition we include files to show how the test can be implemented by way of an OLS example. In the regression  $y$  is regressed on a standard normal  $x$  and a constant, where we have a potential break in the coefficient on the stochastic regressor. The regressors are strictly exogenous and the shocks are homoscedastic.

Pbtols.m: This program takes  $y$  and  $x$  as well as the null value for the coefficient on the stochastic  $x$  after the break as arguments. The program then computes the 71x4 set of statistics required for postbreaktest.m, and calls this program to run the test. It then returns the results from postbreakm.m. This file provides a template for how to implement the post break test, simply change this program so that it computes the relevant statistics for your problem.

mc.m: This program runs a Monte Carlo for various  $\rho$  and  $\delta$  given the coefficient on the stochastic  $x$  variable after the break. It tests this value for zero in each case, so setting  $\beta=0$  examines size and  $\beta$  nonzero examines power. For the particular setup we have the standard error of the MLE's for the coefficient is  $1/\sqrt{T}$ , the  $\beta$  is in terms of the number of standard errors. For different designs this would need to be changed if you want to make the results comparable to Figure 4.